

7. The medical system of claim 1 wherein the fluid path extends through one of the microneedles.

8. The medical system of claim 1 wherein one of the microneedles is an analyte sensor.

9. The medical system of claim 1 wherein the reservoir is contained within a housing.

10. The medical system of claim 9 wherein the housing is a wearable housing.

11. The medical system of claim 10 wherein the housing is an infusion pump.

12. A medical infusion system comprising:

a wearable housing;

a reservoir contained within the housing and collapsible for containing a fluid, the reservoir comprising an integral septum;

a fluid path fluidly connected to the reservoir; and

a plurality of microneedles, each microneedle having a body portion and at least two appendages, the plurality of microneedles fluidly connected to the reservoir by the fluid path wherein the fluid path extends through one of the microneedles,

wherein the reservoir is fluidly connected to the fluid path by a needle penetrating the septum on the reservoir.

13. The medical infusion system of claim 12 wherein the body portion of each microneedle is made from a first material and the appendages of each microneedle are made from a second material.

14. The medical infusion system of claim 13 wherein the second material is different from the first material.

15. The medical infusion system of claim 14 wherein the second material is dissolvable.

16. The medical infusion system of claim 12 wherein the appendages provide for microneedle retention.

17. The medical infusion system of claim 12 wherein the reservoir is a non-pressurized.

18. The medical infusion system of claim 12 wherein one of the microneedles is an analyte sensor.

19. A medical infusion and sensing system comprising:
a wearable housing;

a reservoir for containing a fluid, the reservoir collapsible and contained within the wearable housing, the reservoir comprising an integral septum;

a fluid path fluidly connected to the reservoir;

a plurality of microneedles fluidly connected to the reservoir by the fluid path wherein the fluid path extends through one of the microneedles, each microneedle having a body portion and at least two appendages; and one of the microneedles is an analyte sensor attached to a path, the path attached to the housing,

wherein the reservoir is fluidly connected to the fluid path by a needle penetrating the septum on the reservoir.

20. The medical infusion and sensing system of claim 19 wherein the wearable housing comprising a reusable portion and a disposable portion.

21. The medical infusion and sensing system of claim 19 wherein the reservoir comprises at least one flexible portion.

22. The medical infusion and sensing system of claim 19 further comprising a pumping mechanism for pumping fluid from the reservoir through the fluid path.

23. The medical infusion and sensing system of claim 19 wherein the pumping mechanism is actuated using at least one shape memory actuator.

24. The medical infusion and sensing system of claim 12 wherein the body portion of each microneedle is made from a first material and the appendages of each microneedle are made from a second material.

25. The medical infusion and sensing system of claim 24 wherein the second material is different from the first material.

26. The medical infusion and sensing system of claim 25 wherein the second material is dissolvable.

27. The medical infusion and sensing system of claim 19 wherein the appendages provide for microneedle retention.

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